

REMARKS

Receipt of the Office Action mailed March 19, 2003 is acknowledged. Claims 1-16 remain pending. Reconsideration of the application is respectfully requested since the present remarks are believed to clarify the nonobviousness of claims 1-15 that were finally rejected by the Examiner. No claims have been added, amended or canceled.

On page 2 of the Action, the Examiner has withdrawn the 101 and 112, rejections and the 103 rejection based on Bastioli et al. Claims 1-16 remain rejected under 35 USC 103 over Hammer et al (US 5,928,737) in view of DD 247830A (abstract). This rejection is respectfully traversed for at least the following reasons.

In Applicants' prior reply it was pointed out that the DD 247830A abstract fails to teach the use of thermoplastic starch with a polyurethane and that the starch used therein is a "native" starch, which act as a filler. The Examiner countered this point by stating that the Abstract of the DD does not mention "native starch", nor does it say that its starch serves as a filler. Instead, the third line of the abstract states, "A PUR-cellulose cpd. is used." The Examiner read "PUR" as "polyurethane" and "cpd." as "compound," it was the Examiner's apparent conclusion that an interaction takes place between the polyurethane and the cellulose (i.e., starch) since a "compound" is produced. Applicants respectfully disagree.

As previously stated, Hammer et al. '737 discloses a biaxially stretched tubular food casing comprising thermoplastic starch. The casing material may further comprise fiber reinforcement, proteins, crosslinkers, lubricants, synthetic polymers and the like. Suitable synthetic polymers mentioned include polyamides, polyesters, polyolefins, polyvinylpyrrolidones and ethylene/ethyl acrylate/maleic anhydride copolymers (col. 3, lines 48-59). Polyester urethanes are not contemplated or even suggested.

The statements regarding the DD reference submitted with Applicants' response filed Dec. 4, 2002, were based on the full German text, not just on the abstract. A translation of a relevant portion of the full German text of the DD is as follows:

"The filled polyurethane employed for the sausage casing according to the invention consists of from 60 to 98% by weight, preferably of from 70 to 95% by weight, of polyurethane and of from 2 to 40% by weight, preferably of from 5 to 30% by weight, of starch. The raw materials for the polyurethane are long-chain hydroxyl compounds, such as polymers and/or polyethers having a molecular weight of from 500 to 3000, short-chain aliphatic and/or aromatic diols having a molecular weight of less than 250 and aromatic or aliphatic diisocyanates. The polyurethane mass employed in the production of the sausage casing according to the present invention may be obtained by the one-shot or prepolymer process. Therein, the starch is admixed with one of the starting components and, thereafter, reacted at elevated temperatures with the remaining components." (Page 1, lines 40-45)

The process is further illustrated in Example 1 of the DD. It reads: *"1000 parts by weight of a polyester alcohol based on adipic acid, ethylene glycol and butane-1,4-diol having an average molecular weight of 2000 are homogenized in a reaction vessel with 165 parts by weight of butane-1,4-diol and 180 parts by weight of potato starch for 5 minutes at 80°C and, subsequently, reacted for 90 seconds with 600 parts by weight of 4,4-diphenylmethanediisocyanate (60°C). the reaction mixture is poured on a plate preheated to a temperature of 130°C. From the solidified sheet a granulate is produced, which is further processed into a sausage casing by using a film blown film extruder, type Brabender."*

Furthermore at page 1, lines 33-34, the text states the following, *"According to the invention, the object is achieved by a sausage casing consisting of a polyurethane which is filled with starch."* The abstract is thus consistent with the full text of the DD. Moreover, irrespective of whether it is chemically linked with the polyester urethane, the starch taught by the DD is conventional, native starch, not thermoplastic starch as recited in the instant claims. Indeed, the process conditions as described in the DD reference would not be capable of converting native starch to thermoplastic starch.

The combination of Hammer with the DD reference therefore does not render obvious the subject matter of the present claims.

It was further the Examiner's contention that the particular amounts/combination of ingredients recited in claim 16 are the result of optimization of properties, which optimization would be motivated by a desire to improve upon casings suggested by the teachings of the combined references. Applicants respectfully disagree. That is, claim 16 is directed to a film comprising a specific urethane comprising units selected from dihydric alcohols, polyhydric alcohols, dibasic carboxylic acids and polybasic carboxylic acids. Nowhere do either of the references being relied upon teach or suggest such a urethane together with thermoplastic starch in a film as instantly recited.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 22135-00006-US from which the undersigned is authorized to draw.

The Examiner is respectfully requested to enter this Amendment After Final, in that it raises no new issues, but merely places the claims in a form more clearly patentable over the references of record. In the alternative, the Examiner is respectfully requested to enter this Amendment After Final in that it reduces the issues for appeal.

Application No.: 09/700,839

Docket No.: 22135-00006-US

The Director is hereby authorized to charge any fees, or credit any overpayment, associated with this communication, including any extension fees, to CBLH Deposit Account No. 22-0185.

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Respectfully submitted,

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